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DEL S. CHRISTENSEN July 26, 2001
(Date of Signature)

PATENT
TH1042 (US)
DSC

THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of)
Rashmi K. Shah et al.)
Serial No. 09/168,770)
Filed OCTOBER 8, 1998)
FLAMELESS COMBUSTOR PROCESS HEATER)

GROUP ART UNIT 1744
EXAMINER: F. VARCOE Jr.
JULY 26, 2001

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JUL 31 2001
TC 1700

ASSISTANT COMMISSIONER FOR PATENTS
Washington, DC 20231

Sir:

RESPONSE

The following remarks are responsive to an Office action mailed May 1, 2001, in the prosecution of the above-identified patent application. Reconsideration of this application in light of the following remarks is respectfully requested

REMARKS

Claims 1-7 and 13-15 remain in the present application. Claims stand as rejected under 35 U.S.C. 102(b) over EP patent 0 450 872 A1 ("872").

The present invention relates to a process heater that includes an oxidation section where fuel and oxidant are combined and reacted without forming flames. This flameless reaction results in low NO_x production, and relatively uniform heat distribution along surfaces of the oxidation volume because radiant heat from the flame is avoided.

Patent '872 discloses a reformer reactor that has a configuration with a burner in the center of a vessel containing catalyst. As the Examiner indicates in the office action, "Ruhl's Figure 1 appears to show a flame, and the reference number 50 is used to indicate a "flame zone"... since the fuel and oxidant are heated above the auto ignition temperature... prior to mixing, the system is capable of carrying out